

Amendments to the Specification:

Please amend the two paragraph beginning on page 3, line 12 through page 4, line 6, with the following rewritten paragraphs:

In one aspect, the invention describes a method performed by a computer for computing modified discrete cosine ~~transfer~~ transform comprising the steps of:

$$\text{computing } x(k) = \begin{cases} [-y(26-k) - y(27+k)] \cdot b_k & \text{for } 0 \leq k \leq 8 \\ [y(k-9) - y(26-k)] \cdot b_k & \text{for } 9 \leq k \leq 17 \end{cases};$$

$$\text{computing } Y'(n) = \sum_{k=0}^{17} x(k) \cos\left[\frac{\pi}{36}(2k+1)n\right] \quad \text{for } 0 \leq n \leq 17 ;$$

defining $Y(0) = Y'(0)/2$; and computing $Y(n) = Y'(n) - Y(n-1)$ for $1 \leq n \leq 17$,

where y is an input data, x(k) is re-arranged data for y, Y' is discrete cosine transform of x, Y is modified discrete cosine transform of y, and b_k is a constant.

In another aspect, the invention describes an ~~MPEG~~ MP-III encoder/decoder comprising:

$$\text{means for computing } x(k) = \begin{cases} [-y(26-k) - y(27+k)] \cdot b_k & \text{for } 0 \leq k \leq 8 \\ [y(k-9) - y(26-k)] \cdot b_k & \text{for } 9 \leq k \leq 17 \end{cases};$$

$$\text{means for computing } Y'(n) = \sum_{k=0}^{17} x(k) \cos\left[\frac{\pi}{36}(2k+1)n\right] \quad \text{for } 0 \leq n \leq 17 ;$$

means for defining $Y(0) = Y'(0)/2$; and means for computing $Y(n) = Y'(n) - Y(n-1)$ for $1 \leq n \leq 17$,

where y is an input data, x(k) is re-arranged data for y, Y' is discrete cosine transform of x, Y is modified discrete cosine transform of y, and b_k is a constant.

Appln No. 09/780,699
Amdt date August 5, 2004
312 Amendment

The encoder/decoder may also comprise of: means for computing ~~$Y'(k) = Y(k) \cdot b_k$~~

$$\underline{Y''(k) = Y(k) \cdot b_k \text{ for } 0 \leq k \leq 17 ;}$$

means for computing ~~$y'''(n) = \sum_{k=0}^{17} Y'(k) \cos[\frac{\pi}{2 \cdot 18} (2k+1)n]$~~

$$\underline{y'''(n) = \sum_{k=0}^{17} Y''(k) \cos[\frac{\pi}{2 \cdot 18} (2k+1)n] \quad \text{for } 0 \leq n \leq 17 ;}$$

$$\text{means for computing } y'(n) = \begin{cases} y'''(n+9) & \text{for } 0 \leq n \leq 8 \\ 0 & \text{for } n = 9 \\ -y'''(27-n) & \text{for } 10 \leq n \leq 26 \\ -y'''(n-27) & \text{for } 27 \leq n \leq 35 \end{cases} ;$$

means for defining $y(0) = \sum_{k=0}^{18-1} Y(k) \cdot c_k$; and

means for computing $y(n) = y'(n) - y(n-1)$ for $1 \leq n \leq 35$;

where Y'' is the modified discrete cosine transform of y multiplied by b_k , y''' is the discrete cosine transform of Y'' , and y' is re-arranged data for y''' .